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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

FRANK, RODNEY T

ART UNIT PAPER NUMBER

2856

DATE MAILED: 07/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

10/054,487

Applicant(s)

LAUMAN ET AL

Examiner

Rodney T. Frank

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____ .
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-73 is/are pending in the application.
- 4a) Of the above claim(s) 21 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 and 23-73 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6, 11 .
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____ .
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: .

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of the embodiment of figure 3, claims 1-20 and 23-73 in Paper No. 12 is acknowledged.

Specification

2. The disclosure is objected to because of the following informalities: Throughout the specification, you refer to item numbers "72 and 74" as both flexible membranes and films. They have to be one or the other. Also, you refer to item number 67 as a guard plate on page 20, line 15. The on page 21, line one you say that the plats are ground and active plates. IS it a guard plate or a ground plate?

Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 13-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant elected a device that does a volume measurement using a capacitive sensor. Since these claims are not directed to the elected species, these claims do not read on the claimed invention and the claims need to be withdrawn or amended to read upon the claimed invention.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 2, 4, 5, 9, 11, and 51-56 are rejected under 35 U.S.C. 102(b) as being anticipated by D'Antonio (U.S. Patent Number 5,569,190). D'Antonio discloses a hypodermic fluid dispenser and a collapsible body for the hypodermic fluid, with a hypodermic needle injecting the fluid once sufficient pressure is applied to collapse the body. There is also disclosed an electrical hypodermic fluid dispenser having a reusable, rechargeable power source, and a reservoir from which hypodermic fluid can be withdrawn for injection through a single injection orifice (see the abstract).

In regard to the claim 1, the device for providing medical fluid is disclosed where a plurality of capacitive plates is positioned around a pump chamber where fluid enters and leaves. As the capacitance changes, as measured by the capacitive plates, then the volume can be indicated by this capacitance measurement change. The capacitive plates are disclosed in column 11, lines 14-23 of the D'Antonio reference.

In regard to claim 2, a pump chamber is disclosed (see column 4 lines 9-11).

In regard to claims 4 and 5, a flexible membrane is disclosed where the membrane walls are moveable to change a volume of the receptacle (see the bellows in column 11 lines 14-23).

In regard to claim 9, this limitation is how a capacitive sensor would work and this would be inherent to the device.

In regard to claim 11, the plates are substantially parallel to each other.

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In regard to claim 51, the apparatus described in the D'Antonio reference would use the method described, and this method is therefore inherent to the D'Antonio device.

In regard to claims 52-56, since the liquid in the pump chamber will increase and decrease over time, these limitations would also be inherent to the device.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-6, 9-12, 31-40, 42, 43, and 45-73 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lang (U.S. Patent Number 5,609,572). Lang discloses a modular cassette infusion system for multiple infusions and the automatic administration of medicament. Sterile disposable cassettes are employed, which possess integral connections for the infusion lines, inlet valves, liquid distribution ducts, pump chambers, outlet valves, venting filters and chambers for the measurement of the infusion pressure. The system renders possible the infusion of 3, 6 or more different infusion solutions and medicaments held in disposable syringes via one or more small-volume pump chambers with outlet valve separately via a plurality thereof in parallel via only one vascular access point to the patient with the correct volume in a pulsating manner or in very small individual quantities substantially continuously in a quick succession one after the other without incompatible medicaments being mixed. After insertion in a universal, electromechanical and pneumatic or only electromechanical or furthermore electrohydraulic valve pump syringe actuating

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device the cassettes are operated with the aid of pressure surges. Since for control an electronic microprocessor control device is utilized, which can furthermore produce a printed record of an infusion and since a compatibility with other infusion equipment, as for example injection pumps is provided for, fixed programs and manual programming steps may solve the most types of infusion problem and provide for a substantial reduction in the work to be performed by nursing staff with an accompanying substantial reduction in costs. Additionally substantially enhanced improved patient safety is ensured (see the abstract). Column 2 lines 44-47 disclose that the device is specifically suited for peritoneal dialysis, as in claim 71. The device utilizes, as seen in figure 3, a pump chamber (47) where a volume of liquid flows through said chamber. Claim 14 of the Lang reference discloses the use of a capacitive sensor to determine the filling level/volume of the filling chamber. The method of providing dialysis fluid to a patient where a capacitive sensor is used to measure the volume of the pump chamber is therefore disclosed.

9. Claims 7, 8, 41, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lang (U.S. Patent Number 5,609,572) as applied to claims 1-6, 8-12, 31-40, 42, 43, and 45-73 above, and further in view of Munshi (U.S. Patent Number 6,426,861). Munshi discloses a high energy metallized film capacitor and method of manufacture thereof. Munshi discloses a film capacitor includes a novel hybrid polymeric film dielectric in which at least one non-polar dielectric homopolymer resin is blended homogeneously in solid-solution with at least one other dielectric polymer resin. The properties of at least one of the dielectric polymer resin constituents of the hybrid polymeric film dielectric are selected to produce a tailored property or properties of the solid-solution blend thereof. The non-polar homopolymer serves to stabilize the hybrid polymeric film. In the film capacitor configuration, the hybrid polymeric film is tightly sandwiched between conformable metal plates (see the abstract). The reason to combine Munshi with the

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Lang reference is to merely have an alternative capacitor design, since this capacitor design would be well known to one of ordinary skill in the art. Therefore, the capacitor plates having a non planar shape or the shape being basically the same as the fluid receptacle would be obvious in view of the above references in combination.

Conclusion


10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sipin (U.S. Patent number 6,280,408) discloses a controlled fluid transfer system. Hunt et al. (U.S. Patent Number 6,207, 522) discloses a formation of thin film capacitors.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney T. Frank whose telephone number is (703) 306-5717. The examiner can normally be reached on M-F 9am -5:30p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (703) 305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.

RTF
July 11, 2003


HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

